

# WHAT ARE HFCs?



December 2021

Hydrofluorocarbons (HFCs) are fluorinated chemicals commonly used as replacements for ozone-depleting substances (ODS) in refrigeration, air conditioning, aerosols, fire suppression, and foam blowing. HFCs are greenhouse gases with global warming potentials (GWPs) that can be hundreds to thousands of times more potent than carbon dioxide (CO<sub>2</sub>). Their use has been rapidly increasing worldwide due to the global phaseout of ODS under the *Montreal Protocol on Substances that Deplete the Ozone Layer* and increased demand for refrigeration and air conditioning.

The American Innovation and Manufacturing (AIM) Act was enacted on December 27, 2020. The AIM Act directs the U.S. Environmental Protection Agency (EPA) to phase down U.S. production and consumption of HFCs by 85 percent by the year 2036 through an allowance allocation and trading program.

## What are bulk HFCs?

Under 40 CFR 84.3, **bulk** means a regulated substance (i.e., an HFC listed at Appendix A of 40 CFR part 84) of any amount that is in a container for the transportation or storage of that substance such as cylinders, drums, ISO tanks, and small cans. A regulated substance that must first be transferred from a container to another container, vessel, or piece of equipment in order to realize its intended use is a bulk substance. A regulated substance contained in a manufactured product such as an appliance, an aerosol can, or a foam is not a bulk substance.

**As of January 1, 2022, importers of bulk HFCs will be required to use their HFC consumption or application-specific allowances except for imports for destruction or transformation, or transshipments. For those exceptions, the importer must directly report to EPA<sup>1</sup>, in addition to filing imports through the [Automated Commercial Environment \(ACE\)](#).**

EPA is working with U.S. Customs and Border Protection (CBP) to develop an improved automated electronic mechanism to support real-time review of HFC imports. To support this automated check, EPA is requiring information, including [Harmonized Tariff Schedule](#) (HTS) codes, to be electronically filed through ACE prior to importation. Importers must use the correct HTS codes for bulk HFC imports and exports.

## Current HTS Codes<sup>2</sup>

HTS Code	Description/Regulated Substance
2903.39.20.20	Fluorinated hydrocarbons: 1,1,1,2-Tetrafluoroethane (HFC-134a)
2903.39.20.36	Fluorinated hydrocarbons: Difluoromethane (HFC-32)
2903.39.20.38	Fluorinated hydrocarbons: Pentafluoroethane (HFC-125)
2903.39.20.40	Fluorinated hydrocarbons: 1,1,1-trifluoroethane (HFC-143a)
2903.39.20.45	Fluorinated hydrocarbons: Other
3824.71.01.00	Mixtures containing halogenated derivatives of methane, ethane or propane: Containing chlorofluorocarbons (CFCs), whether or not containing hydrochlorofluorocarbons (HCFCs), perfluorocarbons (PFCs) or HFCs
3824.74.00.00	Mixtures containing halogenated derivatives of methane, ethane or propane: HCFCs, whether or not containing PFCs or HFCs but not containing CFCs
3824.78.00.20	Mixtures containing halogenated derivatives of methane, ethane or propane: Containing PFCs or HFCs but not containing CFCs or HCFCs <sup>3</sup>
3824.78.00.50	Mixtures containing halogenated derivatives of methane, ethane or propane: Containing PFCs or HFCs but not containing CFCs or HCFCs: Other

<sup>1</sup> For more information about required reporting, please visit, <https://www.epa.gov/climate-hfcs-reduction/hfc-allocation-rule-reporting-and-recordkeeping>.

<sup>2</sup> These HTS codes are valid as of December 2021. We anticipate new HTS codes will take effect starting in early 2022. At that time, the 2022 HTS Codes list will replace the Current HTS Codes list.

<sup>3</sup> As stated in HTS statistical note 2 in the current HTS, 3824.78.0020 consists of hydrofluorocarbon mixtures containing at least pentafluoroethane (HFC-125) or difluoromethane (HFC-32) or 1,1,1-trifluoroethane (HFC-143a), mixed, with or without other ingredients.

## 2022 HTS Codes<sup>4</sup>

HTS Code	Description/Regulated Substance
2903.41.1000	Trifluoromethane (HFC-23)
2903.42.1000	Difluoromethane (HFC-32)
2903.43.1000	Fluoromethane (HFC-41), 1,2-difluoroethane (HFC-152) and 1,1-difluoroethane (HFC-152a)
2903.44.0000	Pentafluoroethane (HFC-125), 1,1,1-trifluoroethane (HFC-143a) and 1,1,2-trifluoroethane (HFC-143)
2903.45.1000	1,1,1,2-Tetrafluoroethane (HFC-134a) and 1,1,2,2-tetrafluoroethane (HFC-134)
2903.46.1000	1,1,1,2,3,3,3-Heptafluoropropane (HFC-227ea), 1,1,1,2,2,3,3-hexafluoropropane (HFC-236cb), 1,1,1,2,3,3,3-hexafluoropropane (HFC-236ea) and 1,1,1,3,3,3,3-hexafluoropropane (HFC-236fa)
2903.47.1000	1,1,1,3,3,3-Pentafluoropropane (HFC-245fa) and 1,1,2,2,3-pentafluoropropane (HFC-245ca)
2903.48.0000	1,1,1,3,3,3-Pentafluorobutane (HFC-365mfc) and 1,1,1,2,2,3,4,5,5,5-decafluoropentane (HFC-4310mee)
3827.51.0000	Mixtures containing halogenated derivatives of methane, ethane or propane: Containing trifluoromethane (HFC-23) or PFCs but not containing CFCs or HCFCs
3827.61.0000	Mixtures containing halogenated derivatives of methane, ethane or propane, containing other HFCs but not containing CFCs or HCFCs: Containing 15 percent or more by mass of 1,1,1-trifluoroethane (HFC-143a)
3827.62.0000	Mixtures containing halogenated derivatives of methane, ethane or propane, containing other HFCs but not containing CFCs or HCFCs: Other, not included above, containing 55 percent or more by mass of pentafluoroethane (HFC-125) but not containing unsaturated fluorinated derivatives of acyclic hydrocarbons (HFOs)
3827.63.0000	Mixtures containing halogenated derivatives of methane, ethane or propane, containing other HFCs but not containing CFCs or HCFCs: Other, not included above, containing 40 percent or more by mass of pentafluoroethane (HFC-125)
3827.64.0000	Mixtures containing halogenated derivatives of methane, ethane or propane, containing other HFCs but not containing CFCs or HCFCs: Other, not included above, containing 30 percent or more by mass of 1,1,1,2-tetrafluoroethane (HFC-134a) but not containing unsaturated fluorinated derivatives of acyclic hydrocarbons (HFOs)
3827.65.0000	Mixtures containing halogenated derivatives of methane, ethane or propane, containing other HFCs but not containing CFCs or HCFCs: Other, not included above, containing 20 percent or more by mass of difluoromethane (HFC-32) and 20 percent or more by mass of pentafluoroethane (HFC-125)
3827.68.0000	Mixtures containing halogenated derivatives of methane, ethane or propane, containing other HFCs but not containing CFCs or HCFCs: Other, not included above, containing substances of subheadings 2903.41 to 2903.48

## Reporting Requirements

Per 40 CFR 84.31(c)(7), EPA requires the following information be electronically filed through ACE consistent with the Customs and Border Protection (CBP) definitions at 19 CFR 101.1 no later than 14 days prior to importation:

- Cargo Description
- Quantity, Quantity Unit of Measure Code, and Quantity Unit of Measure
- Weight and Unit of Measure
- Port of Entry
- Scheduled Entry Date
- HTS Code and Description
- Origin Country
- Importer Name and Importer Number
- Consignee Entity Name
- CAS Number(s) of the HFC(s) imported and, for HFCs that are in a mixture, either the ASHRAE numerical designation of the refrigerant or the percentage of the mixture containing each HFC
- If importing HFCs for transformation or destruction, a copy of the non-objection notice issued consistent with §84.25
- If importing HFCs as a transshipment, a copy of the confirmation documenting the importer reported the transshipment consistent with §84.31(c)(3)(i)

<sup>4</sup> We anticipate these new HTS codes will take effect starting as early as January 1, 2022. EPA will update this factsheet periodically to reflect the current HTS codes.

## Tips when Filing an HFC Import in ACE

### Determining Filing Requirements:

If you import bulk HFCs or HFC blends, you will need to file in ACE. If you have questions about whether the HFCs you are importing are bulk HFCs, please contact EPA at [HFCAllocation@epa.gov](mailto:HFCAllocation@epa.gov).

### Filing in ACE for Bulk HFCs:

Electronic filing is required. We are working on a new HFC reporting solution with CBP that will be available in the future. Until this solution is implemented, you must use the current ODS program in ACE for filing. **You will need to file a PGA message set as described in steps 1-5 and an image of the CAS number(s) as described in step 7.**

1. File the Partner Government Agency (PGA) Message set electronically by typing into existing screens in your software and transmit to ACE.
2. Use ODS Government Agency Program Code within the PG01 record and the electronic image indicator.
3. File if you are using one of the HTS codes listed on the first or second page of this fact sheet (and flagged for EP1 which is being used for both ODS and HFCs).
4. File with Entry (Cargo Release) or Entry Summary Certified for Cargo Release.
5. If you filed correctly using the ODS program code for one of the listed tariff codes and you have allowances, you will receive a 'may proceed.' Note: EPA may manually review these filings to ensure that *all* filing and import requirements have been met, and if not, take action.
6. If you received an "under review" there may be one or more of the following issues with your entry:
  - a. You may not have allowances to allow for the import.
  - b. You may not have provided the appropriate reports or information to EPA and therefore you must correct your EPA message set by following steps 8 and 9 below.
  - c. You may have chosen the wrong program code and therefore you must make a correction to use the ODS program code.
7. In addition to the ODS filing, upload an image in the Document Image System (DIS) that contains the CAS number(s). Label the image in DIS as "EPA\_IMPORT\_OF\_ODS" so EPA can view it.

### Additional Steps for Filing in ACE for Bulk HFC blends, Non-Objection Notices and Transshipment Confirmation:

8. File the PGA Message Set for the PG01 record that has the ODS Government Agency Program code and the electronic image indicator.
9. For HFC blends, in addition to the ODS filing, upload an image in the Document Image System (DIS) that contains either the CAS numbers and AHSRAE numerical designation for the blend or the CAS numbers and percentage of the mixture containing each regulated substance. Label the following: (1) Non-Objection Notice (Label "EPA\_NON\_OBJECTION\_NOTICE"); (2) CAS number(s) and ASHRAE numerical designation; (3) CAS number(s) and percentage of the mixture containing each regulated substance; and (4) transshipment confirmation (Label (2), (3), and (4) as "EPA\_IMPORT\_OF\_ODS"). Examples are provided on page 4.
10. If you are filing an image of a Non-Objection Notice (allowing HFC import for destruction or transformation) or a transshipment confirmation, only use the Disclaim Code 'C – file by other means' in the PGA Message Set; Codes A, B, and D are not to be used for HFC import filings. Please indicate in the file name which document is being uploaded (e.g., non-object or tranship).

### Tips for Filing the PGA Message Set:

For questions on how to file, refer to your ACE software provider's training and guidance or your CBP client representative.

For more information on the phasedown of HFCs, visit <https://www.epa.gov/climate-hfcs-reduction>.

Reminder, make sure you are using the correct Government Program Agency Code for EPA: 'ODS' for filing HFCs.

## Example Non-Objection Notice Received from EPA: Label “EPA\_NON\_OBJECTION\_NOTICE”

Company Nine  
AIM UAT ICF Company 9  
6571 Arlington Blvd  
Suite 406  
Falls Church, Virginia 22045

December 1, 2021

Dear Mr./Mrs. Nine,

This letter serves as a “non-objection notice” by the U.S. Environmental Protection Agency (EPA) in response to your petition received on December 1, 2021 to import regulated hydrofluorocarbons (HFCs) for use in a process resulting in transformation or destruction (Report ID: TDPET-2022-00032\_01, Alias: Test7), consistent with the information below.

Importer:	AIM UAT ICF Company 9
Regulated Substance	Quantity Approved (kg)
HFC-134	15
HFC-41	122
HFC-32	299
HFC-125	100
<b>Total Weight of Regulated HFCs in Shipment:</b>	<b>536</b>
Country of Export:	Canada
Port of Entry into the United States:	Worcester, Massachusetts - 0403
<b>Shipment must arrive before:</b>	<b>December 1, 2022</b>

Please inform the EPA of the exact date of the shipment and the name of the vessel once they have been determined. Also, please be advised that this non-objection notice permits AIM UAT ICF Company 9 to import the aforementioned quantity of HFCs as one individual shipment only.

This letter confirms the EPA's receipt of the information required in a petition to import regulated substances, as outlined in 40 CFR 84.25(a)(1). A copy of your petition and this non-objection notice must accompany the shipment through U.S. Customs and Border Protection. In addition, AIM UAT ICF Company 9 must submit a quarterly importer report to EPA, as required per 40 CFR 84.31(c)(1), to report the amounts and types of HFCs imported into the United States.

If new information is brought to the EPA's attention which shows that this non-objection notice was issued based on false or misleading information, the agency has the right to revoke and void the non-objection notice, pursue all means to ensure that the regulated substance is not imported into the United States, take appropriate enforcement actions, and apply administrative consequences.

If you have any questions regarding this non-objection notice, please contact Esha Bhardwaj at +1 (202) 564-6139 or [bhardwaj.eshia@epa.gov](mailto:bhardwaj.eshia@epa.gov). Alternatively, you can call me at (202) 343-9591.

Sincerely,

Luke Hall-Jordan, Chief  
Stratospheric Program Implementation Branch

## Example Transshipment Confirmation Notification Received from EPA: Label “EPA\_IMPORT\_OF\_ODS”

Jane Smith  
Test Company 9  
6571 Arlington Blvd  
Falls Church, Virginia 22045

December 1, 2021

Dear Mr./Mrs. Smith,

This letter serves as a “confirmation notice” by the U.S. Environmental Protection Agency (EPA) in response to your notification of intent to tranship hydrofluorocarbons (HFCs) through the United States received on December 1, 2021 (Report ID: HSHIP-2022-00099\_01), consistent with the information below.

Importer:	Test Company 9
Regulated Substance	Quantity (kg)
HFC-134	75
HFC-41	1,500
<b>Total Weight of Regulated HFCs in Shipment:</b>	<b>1,575</b>
Source Country:	Canada
Intended Port of Entry into the United States:	Worcester, Massachusetts - 0403
<b>Expected Year of Import:</b>	<b>2022</b>

This letter confirms EPA's receipt of the information required in a notification of transshipment of regulated substances, as outlined in 40 CFR 84.31(c)(3)(i). The regulated substances must be exported within six months of import, and you must notify EPA that the shipment was exported from the United States within 10 working days of the export, per 40 CFR 84.31(c)(3)(ii).

If you have any questions regarding this confirmation notice, please contact Esha Bhardwaj at +1 (202) 564-6139 or [bhardwaj.eshia@epa.gov](mailto:bhardwaj.eshia@epa.gov). Alternatively, you can call me at (202) 343-9591.

Sincerely,

Luke Hall-Jordan, Chief  
Stratospheric Program Implementation Branch

## Example for Filing CAS Number (Step 7): Label “EPA\_IMPORT\_OF\_ODS”

### EPA\_IMPORT\_OF\_ODS

Chemical Name	CAS Number
HFC-134a	811-97-2

## Examples for Filing CAS Numbers or ASHRAE Number for Blends (Step 9): Label “EPA\_IMPORT\_OF\_ODS”

### EPA\_IMPORT\_OF\_ODS

CAS Numbers	Composition
75-10-5	50%
354-33-6	50%

### EPA\_IMPORT\_OF\_ODS

ASHRAE Number: 410A

CAS Numbers
75-10-5
354-33-6